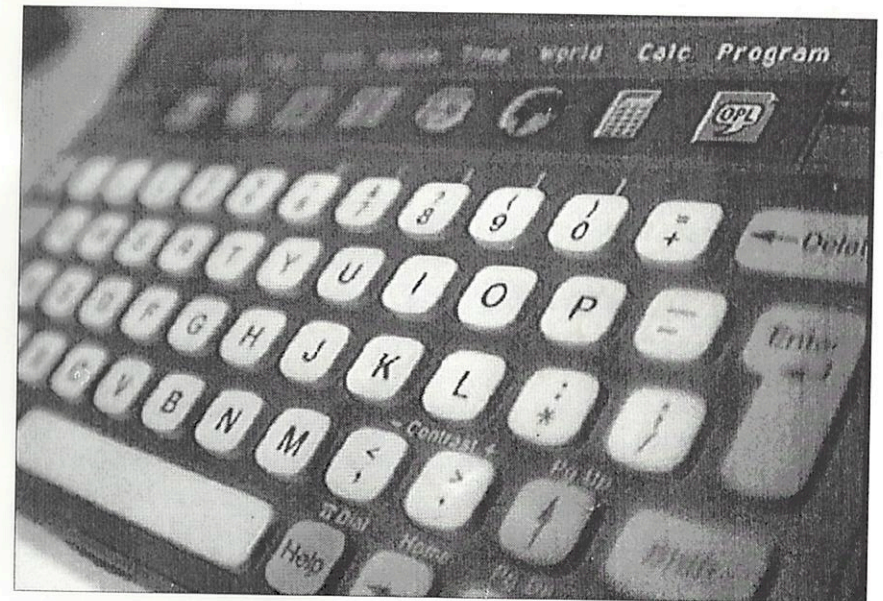


Palmtop

The journal for Psion Series 3 and 3a users

Issue 1, Volume 1

January / February 1995



News, reviews, gossip, feature articles, programming,
letters, hints & tips, tutorials and more...

...48 pages of up-to-date information
on your favourite PALMTOP computer!

Contents

2 Editorial

Hello, and welcome to PALMTOP!

4 Palmtop News

Rumours and forthcoming attractions in the Series 3/3a world

6 Readers' Letters

What *you* have to say about it all...

8 A Closer Look

Reviews of the latest goodies for your most prized possession

21 Interview

Steve Litchfield, the Series 3 shareware mogul tells all...

26 Programmers' Workshop

A regular dose of mental exercise, with Andrew Baldwin

31 Program Listings

Some examples to try from Andrew's Workshop

35 Name That Cell!

A short how-to on using named cells and ranges in spreadsheets

40 Getting Connected

Pete Sipple tells you what online services have to offer Psion users

46 Hints & Tips

Some quick flashes of inspiration on Series 3/3a operation

Editorial

Hello and welcome to *Palmtop*, the very first issue of a brand new Series 3/3a newsletter. Firstly I must apologise for the lateness of this edition. I have really been snowed under with work over the past weeks, and the preparation needed to build a newsletter 'from scratch' was rather more time-consuming than I had initially anticipated. The preparation is all finished now, though, and I intend to complete the next few issues on a 6-7 week cycle until the magazine is distributed at the beginning of its coverage period, rather than at (or past!) the end. I'd like to take this opportunity to thank everyone for bearing with me on these delays, and I promise to get things back on track as soon as possible. As some consolation for the long wait, *Palmtop* will now be 48 pages each issue rather than the originally planned 32 pages.

Though not quite a 'bolt out of the blue', my first really serious thoughts of producing a newsletter for the Psion palmtops didn't surface until early November 1994. I had previously contributed a small number of articles to one of the existing UK-based newsletters, and gradually got to thinking that there was room in the market for a new and different 'magazine'—one offering not only more pages, but also sufficient range of content to keep it of consistent interest to all Series 3 and 3a users.

Hence I began to approach friends and contacts in the Series 3 world, and was pleasantly surprised at the level of support and enthusiasm I received from almost everyone I spoke to. It seems that many Psion users would like something which gives them an interesting read, covers all levels of operation of their machines, and keeps them properly and reliably up to date with the latest available software, hardware and shareware offerings. It will be the mission of *Palmtop* to provide this through carefully selected articles, news and reviews.

Apart from careful and conscientious editing, reader feedback should form a vital part of this process. Without comments and criticism from the people buying *Palmtop*, I can only assume that everyone is happy and that no changes need to be made. If there is anything you don't like about this first issue then please, please either write, telephone or e-mail me to tell me so. I don't mind how critical your comments might be, I am only concerned that if there is something you don't like about *Palmtop*, then I should be trying to put it right. This venture can only be a success if all of the readership are happy with the content, and continue to renew their subscriptions year by year.

In order to help encourage the flow of contributions from readers I will contin-

ue to extend your subscription by one issue for anything you write that is published within the pages of *Palmtop*, no matter how small. For anyone thinking of writing longer articles, I am currently offering one year's free subscription or £20 for any published article over 1000 words in length. This amount will be increased as the readership expands.

So, please consider contributing something to *Palmtop*. If you need ideas on what to write then contact me for a list of some of the things I (or others) would particularly like to see in the mag'. I would suggest that you contact me *before* starting work on longer articles, as you may be duplicating something already being done by another contributor.

Apart from the regular features such as news, reviews, how-to's, readers' letters, hints & tips, programming, etc., I hope to include several other items on an irregular basis. These may include competitions, perhaps a small crossword or Word Search, some of the more interesting 'user profiles', and even the occasional piece of Psion-related fiction. How about a regular cartoon strip? If you feel that you may have something to offer in any of these areas or have some good ideas of your own then let me know!

After much deliberation it has been decided that *Palmtop* will *not* include any advertising within its pages. I have decided upon this as the best course of action in order to keep the content

completely impartial, and to prevent any tendency for the magazine to become merely a mouthpiece for its main advertisers. I confess that dealer advertisements do have their uses, but there are numerous other computer monthlies that include a far wider range of advertisements than could ever be covered within the scope of *Palmtop*, so I will leave it to them. As a result, *Palmtop* will always quote the recommended retail price for all software and hardware, and it will be up to the individual user to track down the best supplier for their own requirements on price versus service/support, etc.

You will notice that this first issue is printed on my 300dpi 'domestic' laser printer. This does not give the quality of appearance I would really like for the magazine, but as the readership expands it is intended that this will be done on higher resolution, higher quality equipment. Also, once the mag' gets really established it may become feasible to have the entire layout done professionally, rather than with my own (very limited) DTP skills. No matter what happens, you can rest assured that as the circulation increases, the quality of both presentation and content of *Palmtop* will increase accordingly.

I hope you enjoy issue 1, and please let me know what you would like to see in future issues—the shape of this magazine is in your hands.

Steve Clack - Editor

Palmtop News

The latest hot gossip on what's happening in the Psion world

New Series 3a imminent...

Rumours of a new machine have been rife for the past month or so, and some fairly reliable facts are finally emerging. The current story is that two new versions of the Series 3a will be released around April or May of this year. These will incorporate 1Mb and 2Mb of RAM respectively, and will probably have a spell-checker and thesaurus built into ROM, as well as a version of the popular 'Solitaire' card game. It seems most probable at this time that the machines will not include any other additional features or new applications.

This news will be a disappointment to those who were gleefully ingesting the earlier rumours of ARM processors, infrared links and PCMCIA compatibility, but Psion appear to think that the current machines are sufficiently far ahead of the competition that a completely new machine is not yet warranted.

The two new machines have two major implications to prospective buyers:

Buying a machine with 1 or 2Mb of internal RAM will free many users from the need to buy external SSDs.

Although the internal RAM is the least secure means of data storage when compared to either Flash or RAM packs, many people (particularly non-'enthusiast' users) plan never to buy any external storage for their 3a's.

Secondly, more ambitious software developers will see this as an opportunity to create more sophisticated applications for our delectation. Perhaps now we can have full send and receive capability for the 3Fax?

Overall, there seems little reason for most existing 3a users to 'upgrade' to one of the new models, excepting those people who have to run many programs at once, and hence frequently run out of working memory on the current machines. In due course this situation may well change, as the previously mentioned mega-apps start to become available, and require more space in which to run.

The names of the new machines are not known as yet, and they may be called just 3a-1Mb and 3a-2Mb (it's reassuring to know that Psion are more creative with their products than with their naming strategy, isn't it?)

For new purchasers they seem to represent very good value for money, with the 1 Meg version at £349 and the 2 Meg at £399, both including VAT. If one takes into account the cost of the existing (quite excellent) spelling checker and thesaurus at around £40, plus all that extra RAM, then I think we can feel quite pleased at the price.

Your views please! Do you feel disappointed that the much-vaunted Series 3b/4/whatever is not yet with us, or do you think there is still plenty of mileage left in the 'old' Series 3/3a. Why not write in with your (preferably controversial) comments?

Fax software at last?

There have been recent rumours that Psion may be planning to release the fax-out software supplied with their 3Fax for use with any fax modem. This rumour is not supported by Psion themselves at the moment, but you can expect to see details in *Palmtop* if and when it becomes a reality...

More noise from your 3a...

Psion's new sound manipulation software, *Soundmaster*, has still not been released—though it should happen 'very soon now'. The package will allow comprehensive editing of pre-recorded sounds, and includes a library of 50 .WVE files to get you started. Price will be £19.95 (inc. VAT), supplied on 3.5" PC floppy disk ONLY. Release permit-

ting, *Soundmaster* will be reviewed in the very next issue of *Palmtop*, so look out for it soon!



JBData



DataView



DataDeLuxe

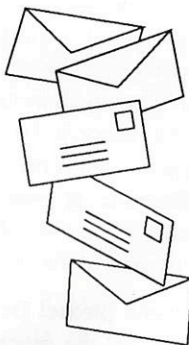
'Grown-up' databases come of age...

The Series 3 database market is taking a sudden lunge forwards at the moment, with the release of Pocket & Soul's major revision (2.5) of their previously rather buggy *DataDeLuxe* package, and Purple Software's new *DataView*. I have just received copies of both, and they look excellent; they offer lots of additional functionality beyond the built-in DATA application, and are well worth considering by anyone requiring more than the minimal sophistication of the standard DATA application.

JBData, a good quality freeware database package has recently been given a major upgrade, so users now seem to be suffering from a healthy excess of choice. The next issue of *Palmtop* will feature a comprehensive review of all three packages, giving comparative information on features and relative speeds, etc. If you're planning to get yourself a new 'heavyweight' database in the near future, then you may be well advised to wait for issue two of *Palmtop*!

Readers' Letters

Here's your chance to comment on the world of Psion palmtops. If there's something about your '3' that you love, hate, or simply have to get off your chest, then send it in! Comments, criticisms and ideas for *Palmtop* are also gladly received, and EVERY published letter gets the author one free issue added to their subscription.



Dear Palmtop

The Psion Series 3a on which I am writing this is the only computer I have regular access to, and indeed is the only computer I have ever owned. I purchased it initially as a replacement for my paper diary and address book, but soon realised that I was merely scratching the surface of the machine's capabilities. My interest grew, and I subsequently became the proud owner of a printer and parallel link, shortly followed by various other SSDs and software.

Having now mastered the machine I cannot imagine being without it. Unfortunately, during my time as a complete novice I always felt at the mercy of the salesperson selling me the equipment: often worrying that I may simply be sold whatever software or equipment was on the retailer's shelves rather than what I really needed. Though I didn't come to grief myself, I feel that anyone with so little knowledge

of computers or the underlying technology is always in a dangerous position when making such purchases.

It is because of all this past experience that I wish I had been able to open the pages of a journal such as *Palmtop* for some impartial and independent advice; I don't suppose for a moment that I am alone in this wish.

John Duxbury
Biggleswade, Bedfordshire

I'm sure you're right John. Newcomers to the desktop computer scene enjoy the benefit of literally dozens of good periodicals and whole shelves full of books on their subject. Series 3 users have a very limited pool of information on which to draw, and for most people every extra little bit helps. I hope that *Palmtop* will be a useful and welcome addition to this pool, and that it helps with your continuing learning process - Ed.

Dear Palmtop

I can't be the only Psion devotee who has an Amiga as a big brother. Mine is an Amiga 2000, the sort built like a large box offering plenty of room inside for expansion. Besides a capacious hard drive, mine is fitted with a *GoldenGate* PC emulator, allowing me to read and write to PC disks (which most of my colleagues use) and to run *Windows* and other PC programs. The Amiga is a wonderful machine, far superior to any PC in my opinion (and that of thousands more Amigans) so it is disappointing to find virtually all Psion literature, programming and thinking assumes everyone has a PC as a main computer. Due to this short-sighted approach I thought I was on my own when figuring out how to link an Amiga to a Psion 3a. Trial and error taught me how to transfer ASCII text in both directions using the Amiga NCOMM program, even how to keep paragraphs and spacing when transmitting from the Psion (make sure the travelling file has previously been saved as 'text' with the Save as command).

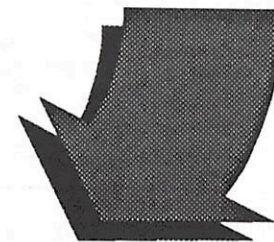
Becoming more deeply involved in the Psion world I have discovered a few more Amiga/Psionists (sounds like a new religious sect) so I am bit encouraged.

How about something specially for Amigans in PALMTOP? There are thousands of us out here!

Jill Dick
Chapel-en-le-Frith, Derbyshire

I hear you Jill. *Palmtop* is produced using a mixture of Power Macintosh, PC, Psion MC400 laptop, and even a bit of the old 3a. I'm thus acutely aware of the perils in trying to get computers of various formats to work together in harmony. I've found from the details on returned subscription forms that *Palmtop* readers use a wide variety of computers, ranging from Amstrad Word Processors to AS400 mainframes.

I am keen to include articles relating to Amigas, Archimedes', Ataris, and whatever else you are all using. If you want to see an article on your own favourite flavour of computer then why not send in an article for publication? - Ed.



If you decide to send something for publication then you can either e-mail it, send it on a floppy disk, or just post a hard copy (obviously the non-preferred method, as I then have to retype it.) I will accept data in any Macintosh or PC format, with a preference for *Microsoft Word 6* or RTF (Rich Text Format).

A Closer Look...

...at some of the newest and most interesting products available for your Series 3/3a

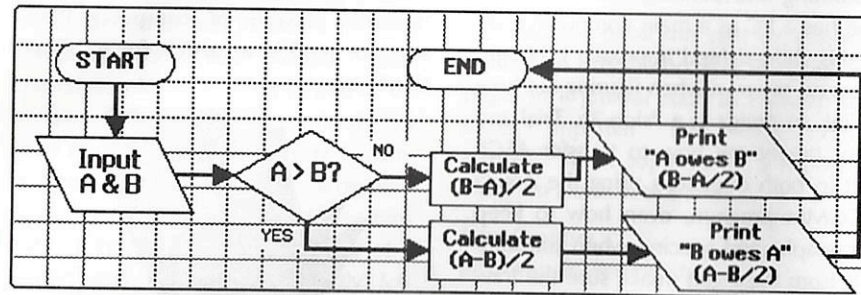
FloChart



FloChart is one of a 'family' of three software packages recently released by Purple Software. They share almost identical user interfaces, many of the commands are the same, and learning one once you are familiar with another

is the only sensible option when attempting to create something like a flow chart, as things frequently need to be moved or re-scaled as the job progresses.

FloChart then is really a graphics program tailored for drawing a limited range of objects (flow chart symbols)



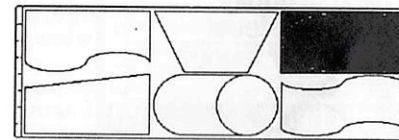
is a ten minute task. The family consists of *FloChart* (for drawing flow diagrams), *OrgChart* (for drawing organisational charts), and *DrawIt* (a general purpose drawing package). All three are so-called 'vector' drawing packages: that is to say that each drawn 'object' can be individually selected, then moved and re-sized as desired at any point in the drawing process. Pixel-based 'paint' packages vary from this concept in that they only allow editing on a dot-by-dot (pixel-by-pixel) basis. Vector drawing is

with connecting lines between them. It supports four types of object: flow chart symbols with text inside, pictures (Psion .PIC files), free-form text, and connection lines:

Purple software state that *FloChart* contains the full ANSI set of flow chart symbols: a total of 19 being included. All symbols can be moved and sized to single pixel accuracy and can be formatted with any of 12 different outline styles (variable thicknesses, dotted, dashed, etc.) Symbols can be automati-

cally aligned relative to each other and distributed evenly across the page, as well as rotated in 90° increments. Text labels within the symbols can be in 8, 11, 13 or 16 point size (either proportional or monospaced), and can be underlined or italicised (though not emboldened), left, right or centre aligned, and will automatically word wrap to fit inside each object. Symbol shapes are simply selected from the scrollable list, then sized and moved around the screen as necessary. A quick press of the *tab* key then switches to the clear space within the symbol, allowing the label text to be entered. The creation of similar symbols is usefully speeded up by cutting and pasting in the usual way then using the *tab* key to modify the enclosed text to suit. The whole process becomes quite fast once you have learnt a few of the keyboard shortcuts, and with a little practice a fairly simple chart can be created in minutes.

Connection lines are probably the most 'intelligent' feature of *FloChart*, as they can be 'sprouted' from any side of one symbol to any side of another, and can go to/from more than one object if required. They remain firmly attached to each symbol even when it is moved, so you don't need to start from scratch if you decide to rearrange the chart a little



Selecting symbols for insertion

during its creation. The lines themselves allow plenty of flexibility, with 39 different styles ranging from plain and dotted through to both single and double headed arrows in a wide variety of types.

Externally created pictures (Psion .PIC files) can be used in place of standard flow chart symbols, or can be used to insert company logos, etc. into the chart.

Free-form text can be used for titles or notes placed anywhere on the page, and can be formatted in the same way as label text within flow chart symbols.

FloChart unfortunately does not allow variable zooming of objects on screen, but a basic page preview facility represents all objects on the display, showing their relative positions on the printed page. A variable sized grid superimposed on the drawing screen aids accurate placement of objects on the page and can be turned off if preferred.

Printed charts can span up to four pages, and both the number and orientation of pages can be changed part way through the drawing. This is most useful, as it is often difficult to estimate the precise shape and size of a chart until it is largely completed.

The on-line help system gives useful information to get you started as quickly as possible, and the tidily presented manual gives adequate reference information if needed.

In summary, *FloChart* is a well conceived and well implemented tool to do a job many people would not have considered possible on a small palmtop computer. It must be emphasised that this software *does* have its limitations, and that the best way to perform any complex drawing work is still to use a conventional desktop computer. Limitations on the processing power of the Series 3 mean that *FloChart* slows noticeably as you increase the number of objects on screen, and some of the editing facilities you would take for granted on a £200 PC graphics package simply cannot be ported to our little machines.

If you have the opportunity to create all your flow charts on a full-sized computer then you would be best advised to do so. If you have a real need to create them on your Series 3 and don't have unreasonable expectations in terms of performance, then *FloChart* represents good value for money and is your only option to get the job done.

FloChart can be purchased on Flash SSD, or on PC floppy disk for £15 less. I firmly believe that all software currently supplied on Flash SSDs (not ROMs) should be distributed in this way, and Purple Software are to be commended for giving users the opportunity to avoid wasting money on yet another unwanted SSD—are you listening out there Psion (and others)?

Purple Software have recently announced an add-on module for

FloChart, providing additional symbols and the ability to import .GIF, .BMP and .PCX graphics files for incorporation into flow charts. Contact Purple Software directly for details.

InfoBox

FloChart is available from selected dealers or from Purple Software direct for £49.95 on flash SSD or £34.95 on PC floppy disk.

Purple Software
tel: 0181 531 8384

Spell Checker & Thesaurus



The *Spell Checker & Thesaurus* has been around for a long time now, but many users are either unaware of its existence, or that it works so effectively with the Series 3/3a Word Processor. Once installed, *Spell check* and *Thesaurus* options appear under the *Word* menu within the Word Processor. This allows spelling checks of either the word currently adjacent to the cursor or of the

Search	Word	Paragraphs
Expand outline	≡+	y the
Collapse outline	≡-	z-kid
Set outline level	≡H	age, a
Use printer layout	≡L	vice)
Password	≡W	s: you
Spell check	≡U	t wor
Thesaurus	≡T	and fi
		out t

whole document. An *options* menu gives the user a choice of whether to skip words comprising numbers and

Selection of the *Thesaurus* option from the *Word* menu instantly searches for synonyms (alternatives) for the word

Unknown word:
palmtops

Replace with:
Palmtop

Add Accept

Tab Enter

Palmtop
palmtop
palm tops

Finished: 3 alternative(s)

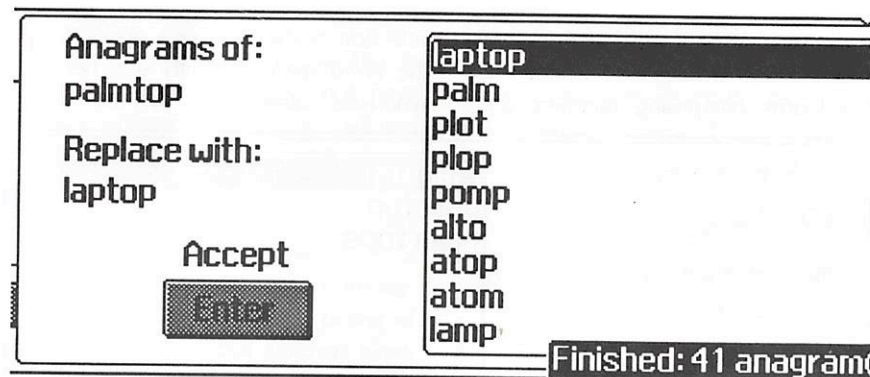
Showing alternatives to a misspelt word

symbols, and words in upper case. The checker will also optionally flag and correct doubled words, such as 'now and and then'. When a word appears that is not in the checker's vocabulary, it gives the option of either selecting from one of the suggested alternatives, entering your own spelling directly from within the checker, or adding the new word to either a global 'user dictionary', or separate 'document dictionaries' that can be created for different types of work.

currently at the cursor position. It then lists all those it finds, sensibly split into word groups (nouns, verbs, etc.) and can be set to give brief definitions if you so choose. The definitions are only available for around 50,000 of the words in the 100,000 word/660,000 synonym dictionary, are terse to say the least, and though no substitute for a good dictionary, can be useful on occasion. Moving the cursor around the displayed alternative words changes the definition to that of the one selected,

noun	newsletter newspaper, journal, bulletin, daily, organ, publication, review; article, story, bulletin, byline, column, communication, dispatch, editorial, feature, headline, item, report, vignette.
1	a separate item or thing
2	clause or provision etc
3	a separate composition within a publication
4	to bind by articles of an agreement.

In the thesaurus...



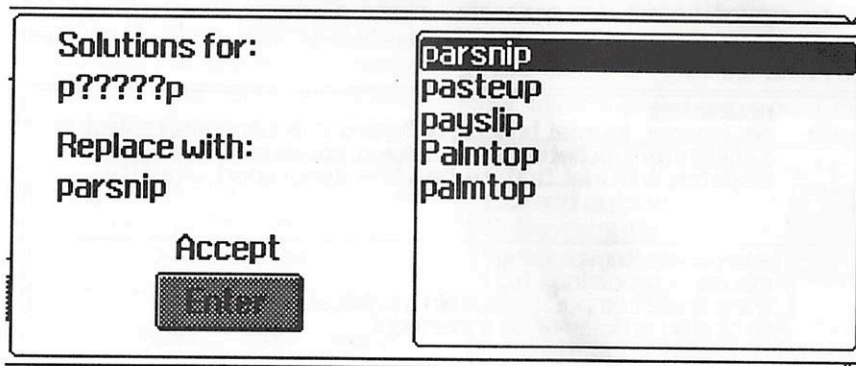
Alternative names for the mag' ?

and it is then possible to re-search for synonyms of the new word. Synonyms are not available for every word, and when this happens the software strangely provides what it considers to be the closest possible match—no matter how inappropriate. This sometimes leads to absurd errors, such as suggesting *Dutch oven* or *Einstein* as viable alternatives to the word *Palmtop*!

Despite this often irritating (though sometimes humorous) foible the software otherwise works very well, and the

spelling dictionary seems to contain a notably more comprehensive lexicon of words than my desktop computer's word processor, and is better at finding the correct alternative to misspelt ones. It also includes a good selection of 'proper nouns' and abbreviations, which helps to reduce the number of 'false alarm' errors that would otherwise require constant additions to the custom dictionary(s).

All of the features described above are run from *within* the Word



The ultimate crossword cheat...

Processor—there is no requirement to start up the spelling checker separately. Usefully though, it is also possible to use it *outside* the Word Processor, simply by executing the *Spell Checker & Thesaurus* from its own icon. Apart from the spelling and thesaurus functions, this also provides something rarely included in spelling checkers—anagram and cross-word solving functions.

The anagram solver allows you to enter a word at the on-screen prompt, and have the software track down all alternative words containing some or all of the letters in a different order. The 'Xword' (crossword) feature permits you to enter all of the known letters in a string, substituting all of the unknown ones for question marks or underline characters. You can therefore enter either P?????P or P____P, and the program will suggest all words that fit the match, such as 'parsnip', 'pasteup', 'payslip', 'palmtop' and so on. If you're a crossword puzzle fan and are not averse to a bit of cheating then you'll really love this, as unless you know only one or two of the letters or the word is quite short, it almost invariably comes up with a short list from which you can find the correct answer.

The software runs on all Series 3/3a's except for the 128K 'Classic', and also works *perfectly* on the old MC400 laptop computers. The software is supplied on a ROM SSD, occupying more than 620K of space. Therefore if your usual practice is to move all of your SSD-supplied software onto a single flash

disk to avoid tedious swapping then you had better get yourself a big one.

The software integrates so seamlessly with the Series 3 (and MC) Word Processor that it's perhaps a pity it wasn't included as standard. As you will see from comments in the *Psion News* section in this issue, Psion *will* be including it with the new 1Mb and 2Mb machines due for release shortly, so I'm eagerly looking forward to recouping that 600K of storage space on my Flash SSD!

InfoBox

The *Spell Checker & Thesaurus* should be available from all Psion dealers, RRP £34.95 including VAT.

Pace MicroLin fx 32 Plus fax and data modem

Though recently blessed with Psion's tiny '3Fax' fax and data modem, anyone concerned primarily with the data (as opposed to purely fax) aspect of this could be forgiven for still feeling a little 'out in the cold'. Although fax transmissions using the 3Fax combine its elegant software with a perfectly usable 9600 bps transfer rate, the poor thing staggers along at a mere 2400 bps when transferring non-fax data. For someone such as myself, requiring regular access to personal e-mail via on-line services while travelling, the 3Fax is a rather inadequate tool.

Modems in general have the advantage of being one of the few items of computer hardware to be largely non machine-specific. This means that any modem purchased for use with your Series 3 can almost certainly be operated equally well with any other computers you may own. This does not, of course, extend to software, and you will require an appropriate communications software package for any machine with which you intend to use the modem. The Series 3 serial (RS232) link hardware is supplied with unspectacular though adequate communications software for this purpose.

The *Pace MicroLin fx 32 Plus* is a pocket sized modem providing 14400 bps (Group 3) fax and 14400 bps (V.32bis) data transfer, and (for those interested) offers V.42 LAPM and MNP classes 2-4 error correction with V.42bis and MNP5 data compression. It is BABT approved for connection to the UK telephone network, is Hayes compatible, and available in both PC and Apple Macintosh versions—the only differences being the fax software and cables supplied. Cables are of course easily interchanged, and whichever version you choose you will still need Psion's 'modem adaptor' cable, which has a 25-way male 'D' connector at one end (which fits directly into the modem) and a circular 9-way at the other (which fits the socket in the bulbous part of the 3Link).

The manual supplied is exceptionally well written, and gives clear information

for beginners to get started with the minimum of effort. The modem can be run from either the mains adaptor or an internal 9 volt battery (both supplied). It is well constructed, and all of the necessary sockets and switches are neatly covered by a hinged flap when not in use. The *Pace* is the same depth as the Series 3, slightly thicker, and about two thirds the length. Its corners are rounded in a similar manner to the Series 3, and the two could in fact be mistaken for electronic 'brothers'. It is supplied with RS232 and standard UK telephone leads, and a snug fitting plastic carrying pouch with a draw string at one end. There is a real feeling of quality and completeness to the whole package, ranging from the nicely spiral bound manual to the inclusion of battery, mains adaptor, carrying case and software. As a final 'rounding' of the package it comes with a full five-year warranty.

To use the modem with my 3a, I plugged it in, switched it on, used the Series 3's internal software and log-in scripts, and everything worked first time. There was no messing, no recourse to the manual and no setting of switches; simplicity itself. In operation it gives useful feedback on your connection status with the usual built-in loudspeaker, plus LED indicators for power on, line connection, data transfer and low batteries—though these are not on a par with the comprehensive LCD display of the Psion/Dacom PDM range of modems.

If you are in need of a fast data modem then the *Pace MicroLin fx 32 Plus* will work with your Psion, PC, Macintosh, and probably any other computer you may own. For around £200 plus VAT it is one of the lowest priced 14.4 kbps pocket modems currently available. If you need the absolute ultimate in speed then don't forget that 28,800 bps portable designs are just beginning to appear, but considering the £100-200 price premium you may prefer to just go for a 14,400 bps design such as the *Pace*, and get yourself online now!

InfoBox

The *Pace MicroLin fx 32 Plus* (PC version) or *Pace MicroLin fx 32 Plus Mac Pac* (Apple Macintosh version) is available for around £200 plus VAT.

**Pace Micro Communications
tel: 01274 532000**

Book review



Third-party produced books devoted to our little Psions are sadly rather thin on the ground, and apart from a small crop of programming works little else exists. I steadfastly refuse to believe that there is nothing else worth printing about the Series 3 machines, or that there are not enough users out there to buy anything that is published. The almost single-handed champion of Psion-related literature is currently *Kuma Books Ltd*,

without whom the sum total of publications worldwide could probably be counted on the fingers of one hand. One of their latest efforts, *The 100 Most Frequently Asked Questions For You And Your Psion Series 3A & 3'* (yes—that's really the title) has just come into my hands, and it has some interesting characteristics...

This is the first book I have seen that is neither a raw beginners how-to, nor devoted entirely to the programming art. Instead, it contains material sent into and discussed by the UK-based *Psion User Group*. The authors, Richard Bloss and Adam Taylor, as it says on the back cover, are partners in the 'Series 3 User Group' (sic).

Presentation of the book is sadly not its strong point. Although the rather slim 70 pages are tidily laid out, it is peppered with typographical errors, and the poor spelling and punctuation can sometimes make the content somewhat irritating to read. The content is quite sound, however, and it is clear from the text that the authors are very well versed in Series 3/3a lore. Despite one or two isolated lapses into complex 'Techno-speak' the volume is quite easily understood and includes a good amount of genuinely useful information. I would consider myself quite familiar with most aspects of Series 3 operation, but still found material of interest, and (notwithstanding the poor editing) enjoyed reading the book from cover to cover. Beginners should find it a particularly useful source of information, and will

almost certainly find answers to some of the gaps in their knowledge.

The '100 questions' (and answers) are simply though logically arranged under alphabetical order of general subject heading, ranging from *Agenda* and *Apple Mac* to *Voice* and *Word Processing*. There is a useful Glossary at the end of the book (I now know what an ASIC is!), together with a short index of the main keywords.

Overall then a useful little book, and it's good to see something not devoted purely to programmers. It's a pity more care wasn't taken in the production, and a pity there isn't a little more of it—the whole thing is only 5mm thick. Us poor Series 3 users sadly have to be grateful for all the information we can lay our hands on though, and that contained in '100 Most...' probably makes it worth the £9.95 asking price for most real Series 3 and 3a enthusiasts.

InfoBox

The 100 Most Frequently Asked Questions For You And Your Psion Series 3A & 3' is available from selected dealers and bookshops, or directly from Kuma on 01734 844335, priced £9.95.

What do you want?

Is there something particular you want to see within the pages of *Palmtop*? If so, then please contact the editor with your suggestions.

PhONEday Tools

PSION
16 April
1995



The Psion-produced *Phoneday Tools* are a small suite of programs designed to automate the transition to the new UK telephone numbering system to be implemented on 16th April this year. For the benefit of our overseas subscribers or any UK readers who have been hiding under a rock for the past few months, Phoneday involves the changing of British area (STD) codes to accommodate the increase in the number of telephone subscribers over recent years. For all but a small handful of codes this simply involves placing a '1' in front of the existing area code (after the usual zero if dialling from within the UK). The other handful of codes (5 cities in total) will be changing entirely: hence Nottingham will be changing from 0602 to 0115, Leeds from 0532 to 0113 and so on. In addition, when making international calls from within the UK the international access code will change from '010' to '00' to make the UK consistent with other European countries.

The implication of all this for Psion users is of course that without some means of automating the process, anyone with a database incorporating UK telephone numbers must manually go through every entry to amend each number. The

handful of exceptions preclude the possibility of simply adding '1' to the front of all numbers, and indeed cellular and premium rate numbers will not be changing at all.

The three component parts of the *Phoneday Tools* are as follows:

WLDfix takes care of all the necessary changes within the built-in *WORLD* application. It is simply executed by selecting the relevant icon, changing all area codes of UK cities in the world database and amending the international access code to '00'. The *World* application itself is of course stored on the machine's own internal ROM, so all changes thus made are stored in a separate *WORLD.WLD* file, created in the \WLD\ directory of your internal memory. This file is only around 2K in size, and is automatically accessed every time *WORLD* is run. Any users who have already added their own cities into *WORLD* will already have this file on their machine, and **WLDfix** simply adds the changes to it, and even fixes any of your own custom numbers that need changing.

phONefix automatically sifts through whichever database files you define, like an electronic sniffer dog, routing out all telephone numbers in need of modification, changing them where necessary and writing the modified database to a new file name of your choosing. Anyone nervous about this process can elect to view each record before it is changed, but in my experience this is entirely

unnecessary. The program can be restricted to search only in those fields with a specific prefix in front of the number (such as Psion's telephone



symbol), or can be given free rein to search through every field. Such is the sophistication of the package that it will even locate multiple numbers on a single line (field) of your file. This way, you can have a line containing '0123 98765(home)/0123 98777(office)/0123 99999(secretary)', and by defining the telephone number delimiter ('/' in this case) it will change all numbers in a single pass.

The final program in the suite may be the only one you will not simply delete after running once. **cONvert** allows you to type in any telephone number, and if it has one of the old (pre-Phoneday) area codes then it will spring up a dialog box showing the correct new number for you. This does require that you enter not only the area code, but the *full* number, as some of the changes are dependent upon (and sometimes change) the number of digits in the non-STD part of the string.

I felt it necessary to review this software for the benefit of the many readers who will not know of its existence, but there is really little else to be said about it beyond a description of its functionality. These are simply elegant, functional

programs that do everything required of them with minimum fuss and maximum efficiency. The suite runs on all Series 3 and 3a machines, and on the 3a it even includes a .GRP file to allow easy creation of a separate GROUP. Very slick.

InfoBox

Phoneday Tools is available as free-ware from selected bulletin boards, 3-Lib, or from Psion direct. It is distributed as PPT.ZIP for both the Series 3 and 3a, with full documentation and on-line help.

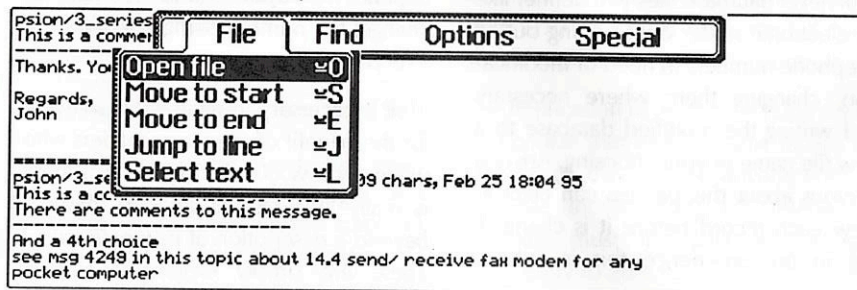
TextView



Although a powerful tool in most respects, Psion's built-in Word Processor suffers (in common with the spreadsheet) from the limitation of only handling data files of up to around 40K in length. When composing documents this limitation can generally be overcome by creating anything larger in more than one piece, then just exporting or printing the component parts in sequence. In any case, most users would not have sufficient patience to

type in more than 40K of text using one or two fingers (or thumbs) on a Series 3 keyboard! As I have never personally typed anything bigger than around 5K into my 3a I would consider the main problem of the 40K limit to be the inability to open and view large text documents imported from other computers. For instance, read-me files supplied with Series 3 shareware are occasionally over this length, and without access to a full-sized computer there is really no way to read these using only a Series 3.

TextView is a simple but useful utility to get around this limitation. Once installed it is possible to open any raw text (ASCII) file by hitting the *tab* key while on the TextView icon, then locating the appropriate file using the Series 3's *File Selector*. Upon selecting the desired file and hitting the *enter* key it is immediately opened at the beginning of the file. The up and down arrow keys simply scroll the document one screen-full at a time, and the font size and typeface can be changed to your personal preferences. Word wrap can be switched on or off, and the line length can be set so that the page width is



wider than the Series 3 screen. It can then be scrolled from side to side using the left and right arrow keys. Text strings can be found using TextView's 'Find' command, which is identical to that in the Word Processor. Finding is very fast, even on large documents, as is the whole scrolling process. For this reason alone many people may actually prefer TextView to the Word Processor, even when viewing quite small documents.

As you would guess from the name, TextView only allows you to view text files, and provides no means by which to edit them. All is not lost, however, as it does give the opportunity to select lines of text for insertion into other applications using the standard Psion 'Bring' facility. Using this feature you can read in enormous files using TextView, select the text in blocks, then paste it into a series of Word Processor (or other) documents.

The process for selection of text is rather basic, and is done by specifying a range of line numbers (say from line 1 to line 100). Although rather tedious, it is the only way to work on large text files without recourse to a second computer. If you intend to use this cutting and pasting technique then you must regularly check the size of any document you are pasting into, as TextView gives no indication of how many bytes of text you have selected at any time.

TextView is not something I use very often, but there are times when it is absolutely invaluable. As it is freeware

and takes up less than 10K of storage space almost every Series 3 user can afford to keep it on their machine for just those occasions.

InfoBox

TextView is available as freeware (for personal or academic use only) from selected bulletin boards and 3-Lib. It is available in two versions: TEXTVW11.ZIP for the Series 3, TEXTVW21.ZIP for the 3a, and is supplied with full documentation and on-line help. Commercial users please contact the author for licensing details:

E-mail:
mfinlayson@cix.compulink.co.uk

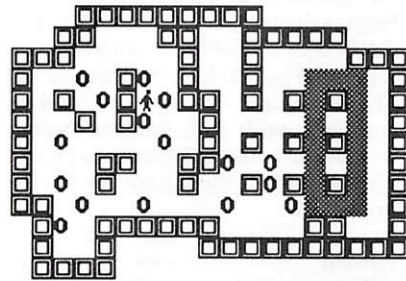
or Rose Cottage
Canal Side
Macclesfield
Cheshire SK11 7DB

Sokaban



If you prefer a little mental exercise to 'shoot-em-up' arcade games then Sokaban may be to your taste. I don't know the origin of the game, but first saw it running under DOS on a PC about five years ago. The 'board' depicts a small person standing within a maze-like labyrinth, and the object is for him/her to push the numerous 'boxes' littered around the maze into designated areas (shaded in grey). The original version represented someone sliding

crates around a warehouse, but the Series 3a implementation (it doesn't run on the Series 3 'Classic') treats this concept in a slightly more abstract way: the 'boxes' are represented by simple 'O' characters, and the person by a little animated 'stick man'.



No—please, not level 13 again!

Despite the rather simplistic graphics the whole thing looks quite acceptable, and has the distinct attraction of being a genuinely enjoyable (and frustrating) game.

The difficulty comes from the fact that your little 'pusher' cannot move two adjacent boxes along together, and can only push them from behind. This means that if ever you accidentally shove one into a corner then the game is lost. Anyway, you'll get the hang of the rules within about 30 seconds, it's the mastering of the 86 levels (yes, really) that takes the time!

The software comprises a single OPA file plus a DBF (standard DATA file) which cleverly stores details of all those levels. I'm currently stuck on level 13

(46 attempts to date!), and seem to have found some new and slightly different problem to solve at almost every level up to that point. Such careful grading of the levels thus helps to keep up the player's interest as he/she progresses.



The software keeps track of your progress to-date, allows several players to resume play at their last successful level, and gives you the single 'grace' of allowing your one last blunder to be undone. No frills, no sound effects, just a simple but challenging brain-teaser.

If you have little enthusiasm or disk space for games in general then Sokaban may be the one you should find room for. It takes up less than 30K of disk space, it's free, and should keep you scratching your head for many hours...

InfoBox

Sokaban is available as freeware from selected bulletin boards and 3-Lib as SOKABAN.ZIP.

Shareware, programming, life, and the Series 3...

—An interview with Steve Litchfield



Steve Litchfield will be known to many readers both in the UK and overseas as the author of the impressive *Fairway* golf game (initially released as shareware, now part of the new Psion Games Pack 3a) or as the person behind *3-Lib*, the comprehensive Series 3/3a shareware library service. Steve has also written a small number of other programs for the machines, and even acts as a co-moderator on the Psion Conference on CiX, the UK-based computer conferencing system. These combined commitments obviously take up a lot of Steve's time, and indeed in September 1994 they became his full-time job...

Palmtop: 'How did Series 3-related tasks become a full-time job for you?'

Steve Litchfield: 'I had been working as a programmer and engineer in the aerospace industry for about 12 years, and since 1992 (when I got my first Series 3) had gradually been shifting towards Psion-orientated work. I initially went part-time at my place of employment (my job was maintaining a VAX/PC

network), then finally gave it up completely to concentrate on the Series 3 work.'

Pt: 'Do you still have time for any "non-Psion" projects?'

SL: 'Other projects do keep cropping up but tend to be short-lived. One example was running a PC-troubleshooting service for local businesses. Unfortunately I only had two calls in the first three months, and one of those was from someone trying to get me involved in network marketing! 3-Lib now has around a thousand customers, and I get about half-a-dozen new enquiries every day. This, coupled with programming projects (mostly MAPPER at the moment) and being a co-moderator on CiX keeps me pretty busy.'

Pt: 'How did you first get involved with "little" computers, and how much do you actually use the machine(s) from day to day—other than when programming?'

SL: 'I bought my first Series 3 to keep me occupied whilst on holiday in Scotland, as I couldn't bear to be apart from a computer for two whole weeks! By the end of the holiday, and purely

for my own enjoyment, I'd written a prototype of *Pitch & Putt*. I didn't think much of it, but uploaded it to a few bulletin boards anyway and was surprised to get a call from Psion UK, who said they wanted to publish it on the forthcoming *Games Pack 1*. And the rest, as they say, is history, with *P&P* developing into *Fairway* for the 3a and Psion now publishing that on the *Games Pack 3a*.'

'I seem to have been blessed throughout with being in the right place at the right time, and long may it continue (grins). I use my 3a to organise my life and my business, and like many other users would find life without it unbearable for more than a day or so. If this sounds over-dramatic, then go lock your 3a in a cupboard and see how long you last!'

Pt: 'I'm afraid you're right Steve. Mine has died on a few occasions, and rather than post it off to be repaired I've always had to drive down to the Service Centre in Greenford within 24 hours flat.'

'What possessed you to take on the task of compiling and maintaining the "definitive shareware library", and has it grown in the way you anticipated?'

SL: 'I started it because I was so frustrated that my own shareware programs were only being seen by a few percent of the Psion-owning population: those with modems and desktop machines. 3-Lib's intended customer base is really those who have no on-line access to Psion shareware. In fact, many on-line

users contact me because I'm cheaper than paying CiX or CompuServe downloading-time charges.'

'I would say that the percentage of Psion users on-line to the world is now much higher than it was, maybe even as high as 10%, but that still leaves an awful lot of people who have no idea that shareware even exists!'

Pt: 'Gathering and collating all the software for 3-Lib seems like a mammoth task; where does it all come from?'

SL: 'I get submissions via post, e-mail, and of course the programs I write myself, plus a few that pop up on CompuServe or other bulletin board systems. By far the largest source is the massive Psion conference on CiX.'

Pt: 'Where do you see the position of Series 3 shareware relative to commercially available software offerings?'

SL: 'I'm very happy with the current balance of commercial and shareware software; it's a pleasure being part of such a "young" side of the computer industry. Innovative software from both camps is still emerging and I'm as excited as everybody else!'

Pt: 'Do you plan to expand 3-Lib to cover future Series 3/3a replacements, and if so what will happen to the "old" Series 3 stuff?'

SL: 'I hope that Psion's next machine will be simply a faster version of the 3a, and that they don't take another discrete step in terms of compatibility. The latter would cause a lot of confusion as to

which programs could be run on which machine.'

'3-Lib will continue to support the Series 3a's successors for as long as I stay interested in the products. I firmly believe that to make a success of something you have to believe in it, and right now I find myself passionate about the 3a and the software available for it: extolling its virtues to bystanders, relatives, etc.'

Pt: 'That's a common trait amongst the "breed", don't you think—showing off the machine at every opportunity?'

SL: 'Yes, I think all Series 3 users do that.'

Pt: 'What would you consider to be the biggest limitation of the Series 3 computers, and in what areas (if any) would you say that Psion "got it wrong"?'

SL: 'The only minus point I can think of is reliability, especially the ribbon cable and keypad. I believe these problems are now more or less ironed out, but even yesterday one of my Series 3's (lent to a friend at the time) died, so the design flaws in earlier units will be around to haunt us for a while at least. Despite the odd flaw, I gather Psion are still selling them as fast as they can make them—so the future looks rather rosy.'

Pt: 'It is becoming increasingly difficult for the "lone programmer" to produce commercial quality software for desktop computers, as modern operating systems such as Microsoft Windows are becoming increasingly complex. Do you think

that the relative simplicity of the little Psion machines is the major reason for the comparatively large amount of "home grown" software?'

SL: 'You've hit upon a very important point here. Do you remember the American TV series, "Knight Rider", with the motto of "One man can make a difference"? I think the S3/3a scene is very much like that. One programmer working part-time for 200 or so man-hours can produce a professional quality application or game, mainly due to the standard simplicity of the hardware (i.e. you don't get 100 flavours of the Series 3 with different hardware), and to the head starts OPL gives to the programmer. In the PC world, the most popular programs frequently need tens or hundreds of thousands of man-hours development—partly just due to the changeable nature of the hardware. Every program has to run with every possible combination of hardware and software. Happily, the advent of *Visual Basic* is leading to a resurgence in home-grown PC applications again, and is an encouraging sign, though it's a pity that *Visual Basic* is so slow... unlike OPL (grins).'

'Anyway, 200 man-hours is still a lot of programming, but it's *manageable* by one person working hard, and that's what matters. Luckily, the rewards are there, as Psion users seem to be very honest in terms of registering shareware. *Fairway 2.2* has over 250 registered users, to give one example.'

Pt: *That's interesting. Persuading people to actually pay for (register) the shareware they use is generally a perennial problem for which there seems to be no easy solution. What are your own views of the registration "incentives" available to the programmer: nag screens, partially disabling the functionality until registered, disabling the package entirely after a set evaluation period, and any others you can think of?*

SL: *'A tricky subject. People (including me) hate time-locked, crippled or over-nagged software, and love totally free and open programs. In between there's the field of "true" shareware: programs that are fully working (more or less), and yet leave the user in no doubt that they haven't paid yet. Good software should make people want to send you money—you shouldn't have to nag them too hard to do it. As an example of that, I've had people who've sent me double the fee I asked for because they were so impressed with the program! I suppose the best way of defining how to get the balance right is to look at some of the most successful shareware available on the S3/3a and learn from their balance of usability versus nagging. Look at MAPPER-3a (smiles), or S3ABANK3 or DRAW206, all of which have received large numbers of registrations.'*

'As a small addendum to this subject, writing a game is rather different; people play a game and get bored with it (compared to useful "applications", which they'll use more as time passes), so "nagging" or "crippling" is slightly

more acceptable in this case. The trick is that you've got to coax the registration from the user before they bored.'

Pt: *The first time I asked you about your programming, you said "I tend to fiddle around with OPL and that's it." Despite this, and the visible evidence of your programming skills (from your software releases) you have obviously invested a significant amount of time to become so proficient at it. Fairway, Slide and Mapper (plus others) are pretty well polished bits of code by anyone's standards. Assuming that you moved to OPL from some other programming environment, how does it generally compare in terms of power and ease of access for the serious programmer?'*

SL: *'I learnt my programming trade in BASIC (like most people), and my aerospace programming jobs were all in FORTRAN. Both these languages have a lot in common with OPL, and so I felt very at home. OPL is a wonderful asset to the novice programmer and both FAIRWAY and MAPPER-3a were written totally in OPL. Many other shareware "greats", WAVEMOD, JBTREE and LANDER3, were all written in standard OPL. These programs may seem out of reach for someone struggling to learn to program, but they do show what's possible without learning "C".'*

Pt: *'What changes would you particularly like to see in the successor to the Series 3?'*

SL: *'In some ways I hope the Series 3a doesn't grow too much in terms of its*

capabilities, in case we stray out of the "One Man" area mentioned above. More onboard RAM and a faster processor would be very nice though, if Psion are reading this, as they are the two most limiting factors for me at the moment. The small screen size doesn't seem to bother me—I like the machine the size and form it is, and a well written program doesn't need a 14 inch screen to be usable.'

Steve is currently working on refinements to MAPPER-3a, his UK 'Geographical Information system' software. Mapper gives information on distances between towns, location of major roads, Postcodes, etc., and is constantly being updated with optional overlays showing various hotels, eating places, airfields, race courses, and numerous other features. Mapper (currently version 2.5) is available as shareware—registration costs £11.

Shareware ??

Many of our readers may be unfamiliar with 3-Lib. This is a service run by Steve Litchfield to distribute shareware and free software available for the Psion Series 3 and 3a machines. Most (if not all) of the software distributed by 3-Lib is available from Bulletin Boards and other sources, but 3-Lib is currently the only means of getting almost the entire library of up-to-date programs from a single source.

3-Lib offers software either the entire collection (currently a couple of hundred programs, around six megabytes worth) on floppy disk, or selected programs on SSD.

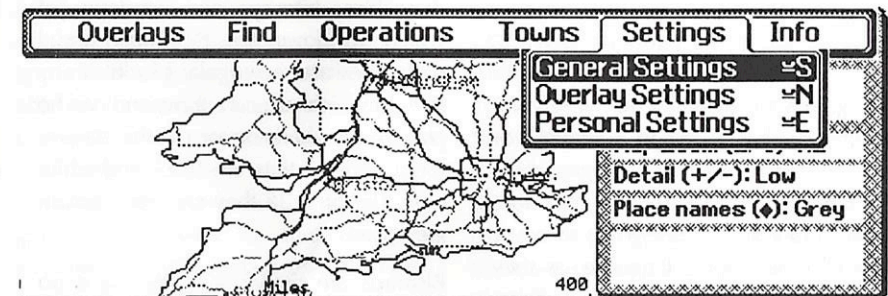
If you would like more information on this service then please contact Steve Litchfield directly on (01252) 515431

or write to 3-Lib Library at:

8 Grove Farm
Mytchett
Surrey GU16 6AQ

or e-mail:

slitchfield@cix.compulink.co.uk



Steve Litchfield's latest 'baby' - Mapper 3a

Programmers' Workshop

by Andrew Baldwin



Welcome to the first in a series of articles on all aspects of programming for the Psion Series 3/3a machines. One of the reasons why the Series 3 and 3a have such a proliferation of public domain and shareware software is that every machine comes with the powerful OPL language built-in. This offers a good degree of access to many of the features of the Psion operating system (known as EPOC), especially to the powerful graphics capability: the result being that it is possible to write programs with a similar look and feel to the applications supplied with the machine. In these articles I will try to appeal to users with a broad spectrum of knowledge, from beginners just taking their first steps in OPL through to advanced users delving into the mysteries of the operating system calls.

Beginners Start Here!

I'm going to assume that everyone reading this has access to a Series 3 or 3a, and also to the OPL Programming Manual supplied with the machine. Because of this, I'm not going to cover the real basics of the language, as they are well described in the first 4 chapters. Before going through this tutorial

you should therefore read through these and be sure that you understand the example programs. In this article I'm going to look at one of the more interesting aspects of the language, and one which is perhaps not covered so well in the manual, namely *Graphics Handling*.

OPL and Graphics

OPL offers very good access to the graphical capabilities of the Series 3 machines, and contrary to what you may think it is also fast at drawing graphics, due to its use of the extensive internal graphics functions included in the machine's ROM. In OPL, all graphic operations are performed on **drawables**. There can be up to 8 of these at any one time, and their size is limited only by memory (and *not* by the size of the screen). There are two types of drawables: **bitmaps** and **windows**, of which **windows** are the most useful type. They are rectangular blocks of any size on which you can draw, and can be placed anywhere on or off the screen. On a Series 3 they are black and white only, but on a 3a they can also contain grey pixels.

Bitmaps are similar, but they have no screen position and are hence never

visible. They can contain only black or white pixels, even on a 3a. Bitmaps are generally used for loading and saving pictures to and from files (using the **gSAVEBIT/gLOADBIT** commands).

Drawables all have an associated **ID** number assigned to them when they are created, and your program uses this to choose which one to operate on.

The "Bounce" program

To illustrate some of these principles, let's write a small graphic demonstration. When finished; this program will draw a random background of lines and boxes and then 'bounce' a hollow box over it (for the entire program, see **Listing 1**). The program breaks down into two main stages: firstly there is the initialisation, then the main program event loop. Let's look at the initialisation:

The first thing we need to find out is our screen size. Every OPL program opens a permanent window (drawable **ID=1**) and we can use the commands **gWIDTH** and **gHEIGHT** to find the size of this window, and hence of the screen. This ensures that our program will run on any machine and still use all the available screen area, be it a Series 3, 3a, or even a PC emulator (which can be set to run with a screen size of up to 640x480). Since we will be animating graphics we need to turn off the automatic graphic update that normally occurs. To do this we use the command **gUPDATE OFF**. After doing this, the

screen will only be updated again each time we use **gUPDATE**, or when the graphic operation buffer is full (which happens after about 20 line draws). Provided that we don't try to perform too many operations between updates, we should be able to achieve smooth animation.

The next step is to draw the background. We do this in a separate procedure, passing to it the screen size we have found. It then loops 100 times, drawing a random line and patterned box onto the background each time. Finally we create our foreground 'sprite', which is in fact a 'window drawable' (not the same as the sprite commands on the Series 3a). We then create a border in the window using four rectangular fills. OK, that's the initialisation completed, now we come to the main part of the program, the event loop:

The speed of the event loop determines how fast the program runs. This includes its response to key presses, how fast the animation occurs, and all the other functions that occur within it. The loop construct we are using here is a **DO/UNTIL**, although we could equally well have used the **WHILE/ENDWH** type. The only difference is that **WHILE/ENDWH** checks a condition at the beginning of the loop, and **DO/UNTIL** checks at the end. Since the exit condition we want to check for is the user pressing a key, it is best to check at the end of each loop.

The first thing that occurs in the loop is the updating of the sprite, and in order to animate smoothly we need to be careful about how this is done. Firstly, we tell the program that we want to act on the window **ID** of our sprite, next we make it invisible (using **gVISIBLE OFF**) to prevent the user seeing any of the actions we perform on it. We then move it to the new position as stored in the **X%** and **Y%** integer variables, move the current drawing position *within the window* to the inside top left corner of the frame, and we copy a rectangle from the *background window* into the centre of the sprite—this is what provides the impression that it is hollow. Of course, using this method we are limited to the hollow section being rectangular, but if you wanted to make a different shape 'see-through', you could use a **mask**, and this option is offered by the built-in sprite commands on the Series 3a.

Finally, we make the window visible again (using **gVISIBLE ON**) and (remember that none of these graphic actions have been performed on the screen, they have merely been put into a graphics buffer of what is known as the machine's **window-server**) then tell the machine to update the screen by calling **gUPDATE**.

The remainder of the program handles the variables to add some 'gravity' and 'bounce' to the action, and to stop the sprite leaving the sides of the screen. It also checks to see if the user has pressed any keys by using the **KEY** command,

and gives the sprite some extra speed if they have. The final **UNTIL** command of the loop tests to see if the user specifically pressed the 'Esc' key (keycode 27), and if they did the loop ends, along with the program itself. In a more complex program, any necessary cleaning up would occur after the end of the loop and before the final **ENDP** command. We don't bother in this case since OPL will take care of it for us.

So, that's it, the entire program. I encourage you to experiment with it to understand how it works, and perhaps to make it do different things. Let's hope it has helped to familiarise you with the ideas involved in handling graphics.

All in one...

Still staying with the graphical aspects of OPL, we will now look into some tricks available to more experienced OPL writers. When you are working on an application that uses a lot of pictures it is very easy to end up with lots of little **.PIC** files accompanying your main program. If you are aiming to distribute it to other people, then without some sort of dedicated installation program a profusion of these files can be a real pain for the end-user to install. So, what's the solution?

Well, firstly the PIC format that Psion use to store pictures actually allows for the inclusion of more than one bitmap per file: in fact there is no limit on the number that can be included. The

gLOADBIT command allows you to load any bitmap from one of these multi-bitmap PIC files, but unfortunately the OPL **gSAVEBIT** command only allows PIC files with one bitmap to be created (or two on the Series 3a), so there is no easy way to produce these files from OPL.

If you have access to a PC, then you can use a program written by Psion called **WSPCX**. This can do a number of useful things, including conversion between PCX and PIC graphic formats, and it also has the ability to link several PIC files together. Assuming that you have a copy of the program (if you don't, then see the *Sources* box below), then all you need to do is create a text file containing (on separate lines) the names of all the PIC files you want to include, listed in the order you want them. If you want the final file to be called **PICS.PIC**, for example, you would then have to rename it as **PICS.PLK**, always with the extension **.PLK** instead of **.PIC**. Next, run **WSPCX** with the **-I** option and the name of your **.PLK** file, and hey presto, all your bitmaps are in one place!

If you don't have access to a PC, then things aren't so simple. There are programs that will perform the same task on an S3/S3a itself, but you will need to search for them (see the *Sources* box).

OK, assuming that you now have your picture files all in one, you only need to distribute two files with your application: the OPA file, and the PIC file. But surely we can do better than this? Well,

yes. When you write an application, you can include the name of an icon file in the **APP/ENDA** section at the top of your source file. This PIC file is in fact included in the OPA file itself (so it doesn't need distributing separately); therefore, all we need do is to include the icon PIC file at the beginning of our program file, and use this instead of the icon file. We now have only one single OPA file to distribute. This is all well and good, but how do we actually use all those picture bitmaps hidden away in our OPA?

Here comes trick: there is an operating system call that will allow us to load a picture file, not from the beginning of a file, but from some offset into it, so all we need to do is to find the location of the PIC file within the OPA and load it from there. This method is shown in **Listing 2**. It is a procedure that replaces any instances of the **gLOADBIT** command, and is called with the number of the bitmap required, thus returning the **ID** of the loaded bitmap. So, now you can distribute easily-installable applications with lots of embedded pictures!

That's all folks!

...well for this issue at least. I will be covering more topics in future articles: mainly concentrating on OPL, but I also hope to take a look at some of the alternatives. As with all aspects of *Palmtop*, reader feedback is welcome. If you have questions about these or other program-

ming topics then please write in, or if you have access to e-mail you can contact me directly at either andrew@zarquon.demon.co.uk on the Internet, or *baldwina* on CiX.

Sources

Where can you get **WSPCX** and similar utility programs from? Well, Steve Litchfield's *3-Lib* library is a good source of programs (address elsewhere in the magazine), but if you have a modem you can also get this and many other useful programs from either the Internet, CiX, or CompuServe.

For a non-PC alternative to WSPCX, you could look for my **JoinPic** program (as part of the **pbm2pic** package) on the Internet at src.doc.ic.ac.uk:/packages/psion/icdoc/, or e-mail me for it. It is written in OPL and runs directly on a Series 3/3a.

Look out for articles in future issues of *Palmtop* investigating the 'net' from the perspective of Psion users—there's a lot going on out there...

Andrew.

What do you want?

If you have a particular aspect of programming (whether it is in OPL, C, assembly language or whatever) that you would like covered in *Programmers' Workshop* then please contact the editor (full contact details on page 39 and 48.)

Classified Advertisements

For sale:

Psion Series 3 Spreadsheet and Accounts & Expenses (both for original Series 3, not 3a). £15 each, including postage.

Contact Steve Clack
on (01869) 249287

For any non-commercial concerns, **Palmtop** will happily publish Classified Advertisements, items wanted, services offered, etc. for anything Series 3/3a related. Any such material will be published free of charge, subject to editorial space.

Cover page competition

PALMTOP is in need of original graphic images for use on the front cover of the magazine. Images can be either drawn artwork or digitised photographs, and can be sent to the editor in any common PC or Macintosh graphics format. Any artwork published will earn the author three free issues added to their subscription.

Program Listings

Listing 1

PROC main:

LOCAL id%,x%,y%,dx%,dy%,wid%,hi%,ret%

REM Present user with instructions

dINIT "Bounce!"

dTEXT "", "Press Enter to start", \$202

dTEXT "", "Press Escape to exit", 2

dTEXT "", "Or any other key to inject some speed!", 2

ret%=DIALOG

IF ret%=0

STOP

ENDIF

RANDOMIZE (minute*60+second)

REM So we have more random numbers

gUPDATE OFF REM Turn off auto graphic updating

wid%=gWIDTH REM Get the screen width (=window 1 width)

hi%=gHEIGHT REM Get the screen height(=window 1 height)

init:(wid%,hi%) REM Draw the background

x%=rnd*(480-50) REM Initialise the variables

y%=rnd*(160-50)

dx%=rnd*9+1

dy%=rnd*9+1

id%=gCREATE(x%,y%,50,50,0) REM Create the "sprite"

gFILL 50,10,0 REM Draw the border

gFILL 10,50,0

gAT 0,40

gFILL 50,10,0

gAT 40,0

gFILL 10,50,0

DO

```
gUSE id%           REM Use the "sprite"
gVISIBLE OFF       REM Make it invisible
gSETWIN x%,y%      REM Move the "sprite" (window)
gAT 10,10
gCOPY 1,x%+10,y%+10,30,30,3
REM Copy the background to the sprite
gVISIBLE ON        REM Make it visible
gUPDATE           REM Update the screen

x%=x%+dx%          REM Update the variables
dy%=dy%+1          REM This adds "gravity"
y%=y%+dy%

IF x%>(wid%-50)    REM Check the variables
  x%=wid%-50
  dx%=(-dx%*4)/5
  IF ABS(dx%)<2
    dx%=dx%*(rnd*20+1)+2
  ENDIF
ELSEIF x%<0
  x%=0
  dx%=(-dx%*4)/5
  IF ABS(dx%)<2
    dx%=dx%*(rnd*20+1)+2
  ENDIF
ENDIF

IF y%>(hi%-50)
  y%=hi%-50
  dy%=(-dy%*4)/5
  dx%=(dx%*4)/5
  IF ABS(dy%)<2
    dy%=rnd*50+1
  ENDIF
  IF ABS(dx%)<2
    dx%=dx%*(rnd*20+1)+2
```

ENDIF

ELSEIF y%<0

y%=0

dy%=(dy%*4)/5

dx%=(dx%*4)/5

IF ABS(dy%)<2

dy%=rnd*50+1

ENDIF

IF ABS(dx%)<2

dx%=dx%*(rnd*20+1)+2

ENDIF

ENDIF

ret%=KEY

REM Check for a key press

IF ret%<>0

gIPRINT "Speed Injection"

IF ABS(dx%)<200

dx%=dx%*(rnd*20+1)

ENDIF

IF ABS(dy%)<200

dy%=dy%*(rnd*20+1)

ENDIF

ENDIF

UNTIL ret%=27

ENDP

PROC init:(w%,h%)

LOCAL t%

t%=1

DO

gAT rnd*480,rnd*160

gLINEBY (rnd*960)-480,(rnd*320)-160

gAT rnd*480,rnd*160

gPATT -1,rnd*50+10,rnd*50+10,0

t%=t%+1

UNTIL t%=100

ENDP

Listing 2

```

PROC LoadPic%:(im%)
  LOCAL id%,wi%,ht%
  LOCAL f$(128),buf%(100)
  LOCAL h%,l%,o%

  REM This procedure replaces calls to gLOADBIT for loading
  REM pictures embedded in an application

  f$=CMD$(1)
  l%=IOOPEN(h%,f$,$400)

  IF l%
    GOTO error2
  ENDIF

  l%=IOREAD(h%,ADDR(buf%(1)),200)

  IF l%<=140
    GOTO error
  ENDIF

  IF buf%(1)<>%O+(%P*256)
    GOTO error
  ENDIF

  IF buf%(2)<>%L+(%O*256)
    GOTO error
  ENDIF

  o%=23+(buf%(11) and $ff)
  l%=PEEKW(ADDR(buf%(1))+o%)

  IF l%<>%P+(%I*256)
    GOTO error
  ENDIF

  IF l%=0
    GOTO error
  ENDIF

  CALL($5f8d,1,o%,0,0,0)

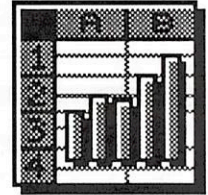
  error::
  IOCLOSE(h%)
  error2::

  id%=gLoadBit(f$,0,im%)
  RETURN id%
ENDP

```

Name that Cell!

Some help and comments on using one of the lesser known features of the Psion spreadsheets - RANGE NAMES



Spreadsheets can be difficult at times. Have you ever created a worksheet, then gone back to it weeks or months later only to find that you couldn't remember where some of the calculations came from? Looking at a cell formula containing a string such as '=COUNT(B8:B500)+(SUM(F8:F500)-COUNT(F8:F500))' is hardly very enlightening when you're trying to remember how you arrived at a given number. This is rarely an issue when the spreadsheet contains little more than a few totalled columns, but in more intricate worksheets it can become a major frustration.

In common with all good spreadsheets, the Psion version (either the built-in 3a/3s version or the separate Series 3 type) incorporates the facility to assign descriptive names to either single cells or whole ranges of them. The implementation may not be quite as sophisticated as on your fifteen megabyte desktop spreadsheet, but it generally

works in a similar manner. For files transferred between your Psion and anything in Lotus 123 (.WK1 or .WKS) format any existing names are even preserved during the translation. Little more than half a page of the manual is devoted to this useful feature, so a simple example may be in order:

Example

Fig. 1 shows a very simple worksheet listing hypothetical sales for four different products. The first column gives the product names, the second gives the quantity sold in each case, the third shows the unit price for each item, and the right hand column simply multiplies the quantity and price together to arrive at a subtotal value for each product type. The *Total Quantity* and *Total Sales* lines at the bottom of the sheet add (SUM) all of the numbers in their respective columns to give totals for the number of items sold and their total value.

All numbers in the C and D columns are entered manually, and those in the E column are calculated by multiplying the numbers in the C and D columns directly to their left. Thus the value in cell E5 is C5 multiplied by D5 and so

by the cursor, in this case C5 to C8. Enter a descriptive name such as 'quantity' in the *name* box of the dialog, leaving the *Range* box as C5:C8 (fig. 2). Press enter to assign this name to the range C5:C8.

A1	B	C	D	E	F	G
1						
2	Sales by Product					
3						
4	Product	Quantity	Unit price	Subtotals		
5	Widgets	4	£12.47	£49.88		
6	Gizmos	7	£16.66	£116.62		
7	Bits	5	£4.45	£22.25		
8	Things	11	£0.17	£1.87		
9						
10	Total quantity	27	Total sales	£190.62		

Figure 1

on. Copy the whole spreadsheet as per fig. 1, entering the numbers in the E column as calculations (*don't* just enter the results manually). For the *Total quantity* type the equation '=SUM(C5:C8)' in cell C10, and for the *Total sales* type the equation '=SUM(E5:E8)' in cell E10.

Creating the names

The way to add names to cells is as follows:

Firstly select all of the numbers in the *quantity* column by moving the cursor to cell C5, then while holding down the *shift* key, hit the *down arrow* three times. With these four cells now selected, choose the *Name range* option from the *Range* menu. This gives the means of naming the cell or cell range covered

Next assign a name to the *Subtotals* items in the E column in the same way. Select E5, *Shift* and *down arrow* three times, then <P>ion><R> to add a named range; this time enter 'subtotals' for the name, and press *enter* again. Note that it is acceptable to use spaces in your range/cell names, provided that the names are no longer than 15 characters in total. This gives enough flexibility to allow meaningful descriptions to be used in most cases, such as 'January totals', 'Average profit' and so on.

Now you have entered these two names, try moving the cursor to cell C10. Instead of showing the unhelpful '=SUM(C5:C8)' formula, you now see the rather more descriptive reference of '=SUM(quantity)', likewise cell E10 now yields '=SUM(subtotals)'. You can now tell at a glance how the totals have

C5	4					
A	B	C	D	E	F	G
1						
2	Sales by Product					
3						
4	Product					
5	Widgets					
6	Gizmos					
7	Bits					
8	Things					
9						
10	Total quantity	27	Total sales	£190.62		

Figure 2

A2						
A	B	C	D	E	F	G
1						
2	Sales by Product					
3						
4	Product					
5	Widgets					
6	Gizmos					
7	Bits					
8	Things					
9						
10	Total quantity	27	Total sales	£190.62		

Figure 3

been arrived at. If you are in any doubt as to what the *quantity* or *subtotals* figure refers to, then you can employ the second use for cell naming—the *jump* function:

Jumping around

With the cursor on any cell, select the *Jump to* option in the *Search* menu. This allows you to move the cursor immediately to either a given cell or range (by typing valid cell or range references such as A1, C9:C12, F2:M:99 and so on), to one of the four corners of the worksheet (it 'knows' only to include the cells you have already entered data into—if you tell it to go to the *Bottom*

right corner of the sheet it doesn't just go to cell IV8192), or jump to one of our previously named cells or ranges. To try this out, ensure that *Named range* is selected in the 'To' part of the dialog box, then select *subtotals* in the 'Range name' box (see fig 3.) The *subtotal* cells are immediately highlighted by the cursor (fig 4.), showing exactly what the '=SUM(subtotals)' in cell E10 refers to.

Such an example is too simplistic to show the real value of cell naming, as the worksheet used is only very small. Imagine if you have a spreadsheet a few hundred rows deep by a few dozen columns wide. Naming allows you to not only show which cells your calcula-

tions refer to, but also to *jump* to a total or subtotal at the bottom of the sheet (currently off screen), then jump back to any other named cell or section of the sheet. This is far more efficient than merely using *page up* or *page down*,

E5 =C5*D5							
1	A	B	C	D	E	F	G
2		Sales by Product					
3							
4		Product	Quantity	Unit price	Subtotals		
5		Widgets	4	£12.47	£49.88		
6		Gizmos	7	£16.66	£116.62		
7		Bits	5	£4.45	£22.25		
8		Things	11	£8.17	£187		
9							
10		Total quantity	27	Total sales	£190.62		

Figure 4

doubly so if you are used to scrolling line-by-line using nothing more than the arrow keys!

Range naming also allows the same cells to be given more than one name. This way, it is possible to maintain the names we have just assigned in the example, and also to name the *whole* sheet (B2:E10) as, say SECTION A. The fact that individual cells are now part of more than one range is quite acceptable, and this allows whole sections of a large sheet to be located in double quick time.

Absolute cell references are supported too. These are covered adequately in the User Guide, but allow functions that use the ranges to be moved or copied around the worksheet without the ranges themselves changing.

The bit that doesn't work...

If you are used to naming ranges in a desktop computer spreadsheet such as *Microsoft Excel*, then it is important to be aware that one of its naming

capabilities is *not* supported on the Psion machines: this is something known as *implicit intersection*. In a nutshell, in our earlier example if the cells C5:C8 were named as *quantity* and D5:D8 as *unit price*, when moving to any of the cells from E5 to E8, instead of showing the formula '=C5*D5' etc., Excel would have automatically shown them all as '=quantity*unit price'. Excel has the 'brains' to understand that although the *quantity* and *unit price* names refer to several cells, it automatically assumes that you are referring to the ones on the same row or column as the one in question.

This is an excellent feature, but one the Series 3 and 3a spreadsheets unfortunately lack. The only way to get something meaningful in place of the '=C5*D5' formula is to individually name each cell in the C and D columns.

Then you could have something like '=wquantity*wprice' for cell E5 (the *Widgets* line), '=gquantity*gprice' for cell E6 (the *Gizmos* line), etc. This technique is of course more trouble than it's worth in practice, as it takes too long to enter separate names for each cell referred to in the equation.

Strangely enough, if you assign the names including *implicit intersections* from within the external spreadsheet then transfer them to the Psion in .WK1 format the names are all preserved intact. If you then try even renaming them with the same name, however, you get a message indicating a *Syntax error*. Any amount of coaxing will not allow this kind of naming to be used directly from within the Psion spreadsheet.

Despite this quirk, cell and range naming on the Psion spreadsheets is functional enough to be of real use, and once you are in the habit of annotating your worksheets in this way you may wonder how you ever managed without it.

WANTED!

If anyone is interested to plug the gap in the market for a horoscope program, non-programmer would be happy to collaborate with details of all the desirable features required by today's mediaeval Psion user.

Contact Jon Miller
on (0181) 5270247

Having Trouble?

Are there any aspects of Series 3 or 3a operation that you are really having trouble getting to grips with?

If there's something you're finding particularly difficult then there's a high probability that other users are in the same situation. This would make the subject an excellent candidate for a tutorial article such as 'Name that Cell'.

If you have something in mind that you would like to see included in a future 'how-to' article then please contact the editor with your ideas.

Post your ideas on this (or any other subject) to:

Steve Clack
25 Avocet Way
Bicester
Oxon OX6 0YN
England

or telephone:

(01869) 249287 within the UK
+44 1869 249287 from overseas

or e-mail:

sclack@cix.compulink.co.uk

Make your wishes known!

Getting Connected...

A little assistance in joining the 'Information Superhighway'

by Pete Sipple

Joining the 'Information Superhighway' is not as frightening as it may first appear. The impression given by the media is that you have to be a high-flying, jargon-spouting whiz-kid in order to be able to 'Surf the Internet'. Yes, the Internet is huge and a little daunting to the novice, but using it via an on-line service makes everything a lot easier to handle.

Getting 'connected' has numerous benefits: you can get access to a multitude of material including the latest World news, new software from the other side of the globe, theatre and film news, technical advice and support, plus information on almost any other subject you can think of. Most importantly though, you can share information with other like-minded folk: in this case, Psion users.

Rather than extol the virtues of 'The Internet' in general, this article is intended to give a brief insight into what the Series 3 user can expect to gain by joining one of the leading on-line services. I have chosen two of the best-known service providers, *CiX* and *CompuServe*, which between them probably have the most to offer the Psion user.

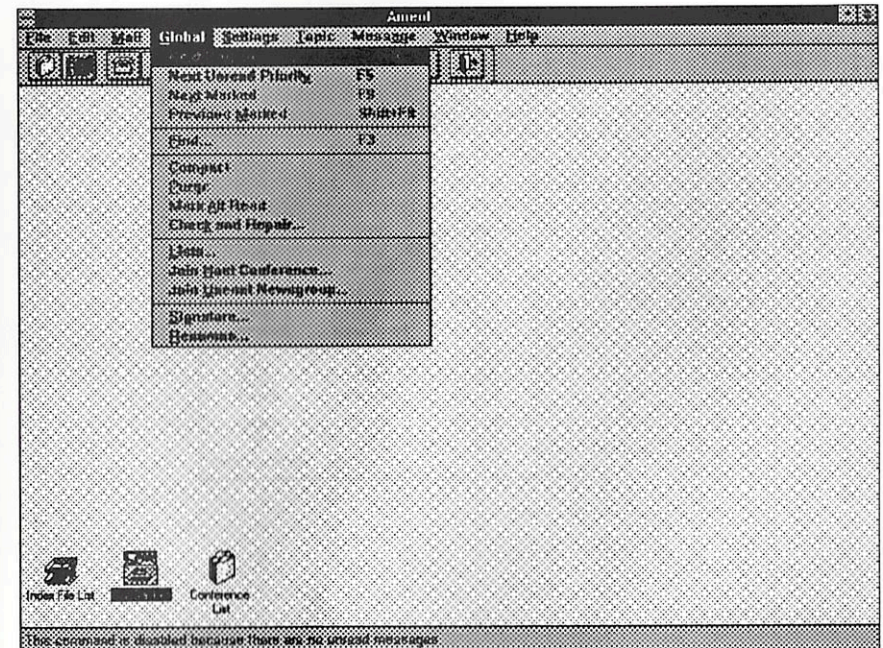
Connecting to The World'

Firstly, of course, you will need a computer. The Series 3/3a is okay for this, though most people tend to use a desktop machine. In terms of ease-of-use, the best user interfaces are to be had when using either a PC running *Windows* or an Apple Macintosh. The primary limitation when using your Series 3 is that your interaction with the service provider is via a less sophisticated interface than the elaborate 'off-line readers' available for the aforementioned desktop machines. Apart from the basic communications software supplied with the *3Link* serial hardware the only software currently available for the Psion machines is a pair of shareware offerings known as *ReadCiX* (for *CiX*), and *ReadCIS* (for *CompuServe*). These both offer basic 'OLR' functions for the Series 3a only, and allow messages to be composed off-line (that is, before you connect to the service provider—thus saving greatly on telephone and connection charges). After composing your messages you can then get the software to automatically dial-in to the provider, transfer (upload) all your pre-composed messages to other users, and read (download) all your mail and con-

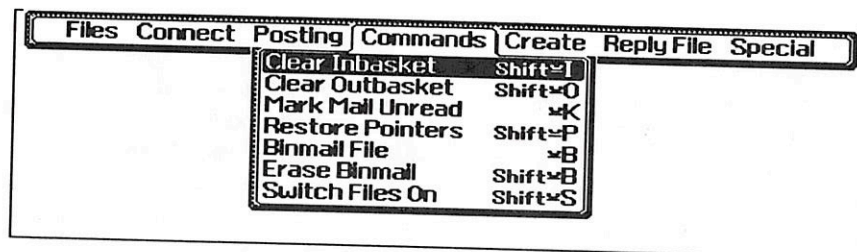
ference messages directly into the Psion; the software will then disconnect you from the provider and hang-up the phone. You are then free to read all the downloaded messages at your leisure, and can compose any replies to these in readiness for your next connection.

Largely due to memory limitations, nothing on the 3a can ever match the power of the desktop-based OLRs. The more sophisticated of them will allow you to easily download lists of the conferences available to you, handle message 'threads' (which keep all messages in properly ordered groups), and generally make the whole process much more accessible.

In summary, although you can survive online with nothing more than a 3a and a copy of *ReadCiX* or *ReadCIS*, you will be in a far better position to explore the wealth of features available online if you have access to a full-sized computer that supports one of the main OLR programs. Without *ReadCIS* or *ReadCiX*, (or if you only have a Series 3 'Classic') then operation with your Psion computer becomes a rather tedious affair requiring communication via the basic 'command line' interface of the *3Link* communications software. This involves learning a whole plethora of DOS-like commands and is really not recommended for the faint hearted.



AMEOL - a handsome 'OLR' if ever I saw one

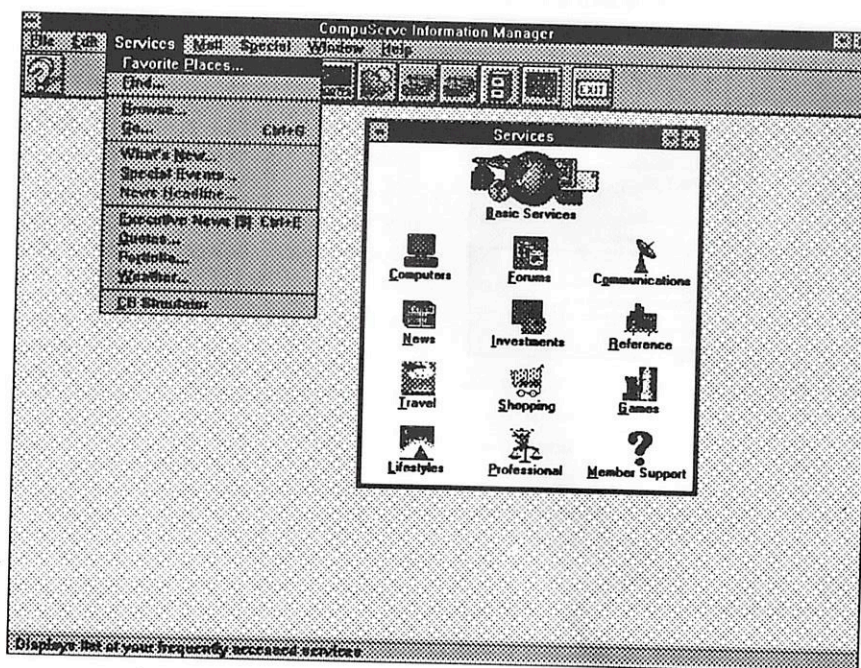


ReadCIX/ReadCIS—almost mandatory when accessing with your 3a

What's available?

CiX and CompuServe have several similarities. As with most on-line services they allow you to send and receive e-mail (electronic mail) to and from other computer users around the world. Every user of an on-line service has their own

unique address, and you may already have noticed e-mail addresses cropping up more often in everyday life. Some newspapers solicit communication by e-mail, and you can even talk to the BBC electronically, sending messages to programmes such as 'Children's BBC' and 'Points of View'.



Another Rolls Royce of OLRs, CompuServe Information Manager

For the Psion user, both on-line services have lively discussion areas for Psion-related matters. As well as picking up hints, tips and advice, you'll find that both have active file areas containing a host of goodies available for you to download, all at no cost other than your telephone bill and connection charges. These include some official Psion programs such as emulators for the PC, new printer drivers and various bug fixes, together with a selection of programs written by experienced users. Every type of software is covered, ranging from bank account managers to art packages, calculators, data files and games. You'll be surprised at just what's out there, and most of the programs are either free, or low-cost shareware. Many of the shareware authors can be contacted by e-mail, and by doing this you can have your say in how software is developed and find out when updated versions become available.

CompuServe and CiX both have their pros and cons, and below is some brief information about each service:

CiX - Compulink Information Exchange

CiX, (pronounced Kicks) is described as 'A system for computer users to exchange information'. At present, there are about 15,000 users signed up to CiX. Although it's not as large as CompuServe and doesn't offer access to as many on-line services, it is UK-based, and possibly a little more 'friendly'. CiX

has greater emphasis on general talk and chatter rather than retrieval of specialised information.

Membership to CiX includes an evaluation copy of AMEOL, an excellent shareware navigation program (OLR) which runs under Microsoft Windows. AMEOL has one major advantage over the equivalent CompuServe software, in that you do almost all of your work off-line. You can browse through the file lists, read and compose messages, study resumés uploaded by other users and check out your billing graphically—all at a leisurely pace. You then connect to CiX, and 'blink', which is the jargon for automatically uploading a batch of commands and messages, and downloading new messages and files. You sit back and watch AMEOL do the work for you, safe in the knowledge that the computer can move around faster than you can. Other (less sophisticated) OLRs are available for Apple Macintoshes, etc., but if you are using a Series 3 to talk to CiX then many of these conveniences are sadly out of reach.

Although the Psion conference on CiX, imaginatively called 'PSION', is not run by Psion staff, the conference is certainly read by members of the Psion team, and quite often they'll reply to queries in an unofficial capacity. Topic areas include OPL, frequently asked questions, software reviews, Psion news and small ads. At the time of writing there are over 1000 people residing in PSION. If using a PC, AMEOL sorts all messages logically in the traditional

'branches-of-a-tree' layout, and are kept on your hard disk until deleted.

CiX also provides easy access to a worldwide discussion 'Usenet Newsgroup' called COMP.SYS.PSION. This carries an assortment of messages including cries for help, details of non-UK software, speculation on forthcoming products and information about Psion sales around the globe.

Joining CiX

To get connected, you need to pay a one-off £25 registration fee, which gets you a copy of AMEOL and the CiX manual. On-line charges, which are in addition to your phone bill, are £2.40 per hour off peak and £3.60 per hour peak (8am-5pm Monday to Friday). These charges are subject to a minimum of £6.25 per month.

You can join CiX while actually 'on-line' by having your modem dial either 0181-390 1255 or 0181-390 1244. You'll be greeted by a *login:* prompt, at which you should type 'CiX'. After the CiX screen, you should enter 'new' at the *Nickname* prompt. You'll then be taken through the on-line registration, where you'll be asked to pick a nickname, input your full name and address, and give your credit card details for billing. You'll then be hooked up.

If you have no credit card, then you can call CiX for details of how to pay your online charges by Standing Order each month.

For more details, call CiX on 01492-641 961, or write to London House, Ancaster Square, Llanrwst, Gwynedd LL26 0LD.

CompuServe

CompuServe is a much larger concern than CiX. The first thing that's apparent is just how *American* it is. All prices are expressed in dollars, and although you're billed in UK pounds and pence it's rare to see a '£' sign anywhere on CompuServe. Excellent 'OLR' software is available for both PC and Apple Macintosh computers, and allows you to move around the service with ease. You're provided with access to International news, weather, travel, etc., as well as other goodies including film reviews and extensive business services. CompuServe allows access to a number of graphic images such as weather maps, etc., but these cannot be viewed directly with a Series 3/3a.

The CompuServe OLRs are less of an off-line program than their CiX counterparts. Mail can be handled off-line, but browsing the forum and searching for files has to be done in real-time, on-line. If you're not careful and aren't familiar with the system you can waste time and money and miss out on what you're looking for. There are other navigation programs around for CompuServe, notably '*CompuServe Navigator for Windows*', but you must purchase these separately—they're not free.

Support for the Psion machines comes in the form of the *Palmtop Forum*, which includes areas for most of the other handheld computers too. I personally find that it's quite difficult to follow the 'thread' of messages left on CompuServe and it's also more difficult to browse through other users' chatter. It's also not quite so easy to detect new messages or files, and they only have a life span of 7 days before they're deleted—CiX don't delete messages for at least a year.

Joining CompuServe

CompuServe have more than one pricing policy. At present, the initial registration fee is £26.45, for which you'll receive a guide to services available, subscription to their monthly magazine, a usage credit and a copy of the PC or Mac' OLR; prices are then expressed in dollars. You will be charged a monthly fee of \$9.95 which allows you free access to the areas described as 'basic'. Additional charges are made for access to 'extended' areas, of which *Palmtop Forum* is one.

The 'extended' rate is \$4.80 regardless of time called. The previous policy of billing at higher rates for faster modems ceased on 5th February this year. It may be wise to ask for details of their current pricing policy before signing up in order to make sure you select the best option.

For more details, call 0800-289458, or write to PO Box 676, 1 Redcliff Street, Bristol BS99 1YN.

Summary - Which one is best?

For Psion issues, (and particularly if you live in the UK) it probably makes sense to try CiX first. The accompanying software is designed to make message tracking easy and logical, and most of the time you're working off-line. CompuServe has a lot more to offer generally, and is very useful for those with a thirst for on-line data. It's a lot more corporate, it's world-wide, and has a wider range of services available. Whilst CompuServe may be a little more polished, as far as I'm concerned, CiX is a little more down-to-earth, more friendly, and ideal for a dedicated Psion user. If you still can't make up your mind then consider getting both—that way you'll miss out on nothing!!

Comments welcomed, by e-mail of course, to:

psipple@cix.compulink.co.uk

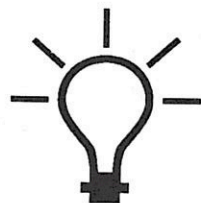
or CompuServe 100333,3266

Palmtop on CiX

If you have access to CiX, then you may like to join the *Palmtop_mag* conference set up specially for our readers. It currently contains topic areas for *chatter*, *suggestions* and *letters*, where you can post comments and material for inclusion in the mag'.

The conference is kindly being moderated by Pete himself, and I hope to join him within a matter of weeks - Ed.

Hints & Tips



HP Deskjet 'cheat'

If you have an HP Deskjet printer and want to print (or even preview) in any proportional typeface you'll find that selecting the HP Deskjet printer driver in *Print setup* has the annoying effect of changing all screen display to courier (or pica, as I wish Psion called it, for that's what it is). The solution to this unwanted typeface change is simple: choose the HP Laserjet III printer driver. Yes, of course the HP Deskjet is not a laser printer, but you'll find that in screen display, print previewing and printing the problem is solved.

NiCad economy?

Do you run your Psion on batteries for much of the time? I do and soon found I was buying and throwing away a couple every week or ten days. Then I bought two pairs of rechargeables, ceased the endless battery-buying, and started saving money. Rechargeables last for some 20 hours (about half to one third the lifetime of regular alkalines), but give enough warning of collapse for the reserve pair to be prepared. I've tried several brands, and find EverReady

rechargeables seem to last longer than any others I have tried.

Jill Dick

Chapel-en-le-Frith, Derbyshire

People seem very divided on the issue of alkalines versus NiCad rechargeables. Alkalines obviously involve a smaller initial outlay, and for the average user will last at least a few months, whereas NiCads require the purchase of at least one pair of batteries plus the charging unit. It is important to note that the voltage on NiCads does drop very quickly as they become exhausted, so the suggestion of having a second fresh pair to hand seems almost mandatory. Provided that this technique is employed it would seem that NiCads are a more economical long-term solution for heavy battery users like Jill.

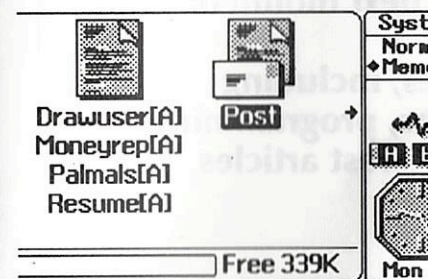
A second issue for many people concerns the 'Green-ness' of disposable batteries. The concept of throwing away large quantities of dead alkalines does not appear to be environmentally sound; conversely, it seems that discarded NiCads can potentially

do much more environmental damage than plain alkalines, mainly by virtue of their highly toxic Cadmium content. One must also consider the environmental impact of leaving the NiCads on charge for several hours each time, which obviously uses some quantity of electricity: thus contributing to pollution in a slightly less direct manner.

Can any of our technically-minded readers put the 'Green' issue to rest? Which causes the greatest damage to our planet: a few Nickel-Cadmium cells or several alkalines? Also, where do Lithium cells fit into all this? What a minefield! - Ed.

Aliases in WORD

Here's a useful Series 3a tip detailed in the Psion manual but often overlooked.



If you look at the accompanying 3a screen image, you can see that I have a 'Post' application next to WORD. It is based on Word, but if I start a new 'Post' document, it automatically picks up a 'Post' template which has my address in the top right hand corner, the

recipients name and address positioned in the correct place to appear though a windowed business envelope, and some useful styles in the body of the letter. The 'Dear Sir' and 'Yours faithfully' are in place too.

It's easy to set up. Just use WORD to format a skeleton of the text, and save it as a template. (e.g., POST.WRT). Then create a new list (alias) of the Word application by positioning the cursor on Word, then 'Create new list' from 'Special' in the *System menu* (see page 229 of the Psion User Guide) and make sure the name of the 'directory for files' is the same as the template (in this case, POST). For the icon, you can choose to have the default Word icon or create your own using a drawing or icon editor package, as I have done. Make sure you set the 'type' to 'Word Processor', then save the alias file as Post.als in your \APP directory.

Now, when you create a new 'Post' document, the POST.WRT template is picked up automatically and you can start writing your letter. Easy! The new 'Post' files are saved in the \WRD\POST\ directory.

Rick Andrews

Reading, Berkshire

HELP! This section needs a constant flow of useful tips to keep it going. Everyone must have at least ONE great idea to share, so please send 'em in! Don't forget that ANYTHING published gets you a free issue...

Next Issue...

Planned for issue 2:

- A head-to-head comparison of three sophisticated database packages: *DataDeLuxe*, *DataView* and *JBData*
- Creating 'little pictures' on your Series 3 - how to do it, and details of the software currently available
- Reviews of the new *Widget Games 3a*, *Winlink 2*, plus anything else released within the next month or so...
- All the usual features, including news, readers' letters, programming, how-to's, general interest articles and lots more!

PALMTOP is produced by Steve Clack, 25 Avocet Way, Bicester, Oxon OX6 0YN, England, who can be contacted by mail, by telephone on +44 1869 249287, or by e-mail at sclack@cix.compulink.co.uk. All comments and criticisms regarding the content are gratefully received, and all correspondence is replied to.

PALMTOP acknowledges that some of the names referred to within the magazine are registered trademarks.